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AMENDMENT

In The Claims:

Claim 1. (currently amended) A junction diode, comprising:

a first conductive type substrate;

a second conductive type embedded region, formed within the first conductive type substrate;

a second conductive type well, formed within the second conductive type embedded region, wherein the second conductive type well has a dopant concentration smaller than the second conductive type embedded region, and the second conductive type embedded region surrounds the second conductive type well, wherein the second conductive type embedded region surrounding the second conductive type well has an identical dopant concentration;

a first conductive type doped region, formed in the second conductive type well; and

at least two second conductive type doped regions, formed in the second conductive type embedded region beside the first conductive type doped region.

Claim 2. (original) The junction diode of claim 1, wherein the first conductive type substrate comprises a P-type substrate.

Claim 3. (original) The junction diode of claim 1, wherein the second conductive type embedded region comprises an N-type embedded region.

Claim 4. (original) The junction diode of claim 1, wherein the second conductive type well comprises an N-type well.

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Claim 5. (original) The junction diode of claim 1, wherein the second conductive type well comprises an epitaxial layer.

Claim 6. (original) The junction diode of claim 5, wherein the epitaxial layer comprises an N-type epitaxial layer.

Claim 7. (original) The junction diode of claim 1, wherein the first conductive type doped region comprises a P-doped region.

Claim 8. (original) The junction diode of claim 1, wherein the second conductive type doped region comprises an N-doped region.

Claim 9. (original) The junction diode of claim 1, wherein junction diode further comprises a plurality of isolation structures set between the first conductive type doped region and the second conductive type doped region.

Claim 10. (currently amended) A junction diode, comprising:

a first conductive type substrate;

a second conductive type deep well, formed within the first conductive type substrate;

a first conductive type well, formed within the second conductive type deep well;

a first conductive type shallow well, formed within the first conductive type well, wherein the first conductive type shallow well has a dopant concentration smaller than the first conductive type well;

a plurality of first conductive type doped regions, formed in the first conductive type well; and

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a plurality of second conductive type doped regions formed in the ~~first conductive type shallow well and the second conductive type deep well~~ the second conductive type deep well and one second conductive type doped region formed in the first conductive type shallow well, wherein the second conductive type doped region formed in the first conductive type shallow well is isolated from the second conductive type deep well by the first conductive type well and the first conductive type shallow well.

Claim 11. (original) The junction diode of claim 10, wherein the first conductive type substrate comprises a P-type substrate.

Claim 12. (original) The junction diode of claim 10, wherein the second conductive type deep well comprises an N-type deep well.

Claim 13. (original) The junction diode of claim 10, wherein the first conductive type well comprises a P-type well.

Claim 14. (original) The junction diode of claim 10, wherein the first conductive type shallow well comprises a P-type shallow well.

Claim 15. (original) The junction diode of claim 10, wherein the first conductive type doped region comprises a P-doped region.

Claim 16. (original) The junction diode of claim 10, wherein the second conductive type doped region comprises an N-doped region.

Claim 17. (original) The junction diode of claim 10, wherein the junction diode further comprises a plurality of isolation structures with each isolation structure set between every pair of first conductive type doped region and second conductive type doped region.

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